

## ABSTRACT

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A clipless bicycle with a latch release mechanism that is concentric to the spindle axis that allows cleat engagement on four sides of the pedal. The pedal includes a spindle with a thread on one end for attachment to a bicycle crank arm, a housing that rotates about the spindle on bearings, two U-shaped members that are affixed to opposite sides of the housing, two sleeves that slip over opposite ends of the housing allowing the sleeves to rotate concentrically about the axis of the spindle, two U-shaped members that are affixed to opposite sides of the sleeves, a torsion spring that is concentrically positioned over the housing such that it holds the U-shaped members that are attached to the housing perpendicular to the U-shaped members that are affixed to the sleeves, and a cleat for mounting on the bottom of a bicycling shoe that can releasibly engage between any of the four adjacent pairs of U-shaped members. The spring has a coil axis that is coincident with the spindle axis. A threaded plug retains the housing assembly on the spindle. An O-ring seals the housing against the Spindle on one end and another O-ring seals the housing against the plug on the other end. A spacer holds the spring in position. The housing, sleeves, bent wire members, spindle, and cleat are made of stainless steel, titanium, or some other material that has the strength and corrosion resistance required. The cleat has two shoulders that can engage under the bent U-shaped members.

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